

REMARKS

Amendments

Claim 1 is amended to expressly recite that the matrix moulding having macroporous and mesoporous cavities. See, e.g., page 4, lines 16-20. New claims 14-19 are directed to further aspects of the invention. See, e.g., Page 2, lines 23 – page 3, line 13; page 3, line 32 – page 4, line 3; page 4, lines 12-14; and page 4, lines 20-27.

Restriction Requirement

In the Office Action, the Examiner argues that the Restriction is maintained because of the unsubstantiated argument that "claim 1 is considered to be either obvious or anticipated over Lang (U.S. Patent No. 3,222,444)" or that "claim 1 is either obvious or anticipated over Feibush (EP 366,252)." Yet, neither of these allegations is substantiated. As discussed further below, neither the rejection based on Lang nor the rejection based on Feibush satisfies even the basic requirements for an anticipation or obviousness rejection. These rejections do not set forth where Lang or Feibush discloses each of the features of claim 1, nor do they even allege any motivation to modify the disclosures of Lang so as to arrive at an embodiment of claim 1.

As discussed previously, if a bare allegation were sufficient, then all an Examiner would need to assert to justify a Restriction would be to allege that a claim was unpatentable over any piece of prior art. Such practice is not sanctioned by any section of the MPEP.

Moreover, upon demonstrating that claim 1 is patentable over the prior art, based on arguments and/or amendments, the sole basis for the Restriction would be eliminated. Thus, rejoinder of the non-elected claims would be proper.

With respect to PCT Rule 13.2, all of the claims refer to the process of claim 1. Thus, all of the claims contain the special technical feature(s) as recited in claim 1. Unity is present. See, e.g., examples 8-17 of Annex B of the PCT Rules.

Thus, withdrawal of the Restriction is again respectfully requested. If not withdrawn, applicants will request rejoinder once claim 1 is determined to be allowable.

Rejection under 35 USC §102 in view of Lang

Claim 1 is rejected as allegedly being anticipated or obvious in view of Lang (US '444). This rejection is respectfully traversed.

To establish anticipation, the prior art reference in question must teach, explicitly or inherently, every feature of the claimed invention. Moreover, in making an anticipation rejection, an examiner must show where each and every feature of the claimed invention is described in the allegedly anticipatory reference. See, e.g., *Ex parte Levy*, 17 USPQ2d 1461, 1462 (BOPA 1990) ["Moreover, it is incumbent upon the Examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference. "] The rejection clearly does not satisfy this requirement, and thus should be withdrawn for this reason alone.

Further, to establish obviousness, the rejection must set forth motivation for making the asserted modification of the prior art. See, e.g., *In re Laskowski et al.* 10 USPQ 2d 1397, 1398 (Fed. Cir 1989). In the instant case, the rejection merely alleges that it would be obvious to "optimize" the process steps of Lang. But, the rejection does not even state which process steps should be optimize, nor how such steps would be optimized to arrive at an embodiment of the claimed invention. Further, the rejection is devoid of any rationale as to why one of ordinary skill in the art would consider a modification of the process steps of Lang to be an optimization. The rejection, thus, clearly provides no supporting arguments for the bare allegation of obviousness, and thus should be withdrawn for this reason alone.

Lang (US '444) discloses a process for producing plastic particles such as a plastic strainer, a plastic filter or a plastic fluid-logic component. The strainers and filters can be used in connection ion exchange water purifiers to allow water to pass through an ion exchange bed while the ion exchange material is retained on the bed. The plastic fluid-logic components can be used in fluid-digital devices, fluid-analog devices, and fluid-analog computers. See, e.g., column 1, lines 15-27. A plastic strainer 18 in accordance with the disclosure of US '444 is illustrated in Figures 1 and 2. A fluid-logic component in accordance with the disclosure of US '444 is illustrated in Figures 7-9.

In the process, a porous skeleton of desired shape is provided, in which at least a portion thereof is soluble in a solvent. The porous skeleton is impregnated with a monomeric material capable of being polymerized to form a rigid polymer which is insoluble in the solvent. Following impregnation, the monomeric material is polymerized in situ, and the resultant shaped element is subjected to the action of the solvent to dissolve the porous

skeleton. See, e.g., column 1, lines 62 - column 2, line 14.

It is evident that US '444 does not disclose a process which utilizes a matrix molding having macroporous and mesoporous cavities. Further, the uses described for the plastic articles in US '444 suggest away for mouldings having such pore structures. Materials having macro- and mesoporous have different properties in comparison with materials that have pore structures such as those described in US '444. It is relatively easy for fluid to flow through a moulding having pores in the millimeter range, such as in the case of ionic water exchange purifier systems as described in US '444. It is more difficult, on the other hand, to distribute liquids within a moulding having macro- and mesoporous cavities. Thus, one of ordinary skill in the art has no expectation that the procedures described by Lang can be used in providing organic mouldings having macroporous and mesoporous cavities.

In view of the above remarks, it is respectfully submitted that US '444 fails to anticipate Applicants' claimed invention. Furthermore, neither US '444 nor the rejection presents any rationale regarding motivation which lead one of ordinary skill in the art to modify the process of US '444 so as to arrive an embodiment in accordance with Applicants' claimed process. Withdrawal of the rejection under 35 USC § 102(b)/103(a) is respectfully requested.

Rejection under 35 USC §102 in view of Feibush et al.

Claim 1 is rejected as allegedly being anticipated or obvious in view of Lang (US '444). This rejection is respectfully traversed.

Claims 1-4 and 12-13 are rejected as being anticipated or obvious in view of Feibush et al. (EP '252). This rejection is respectfully traversed.

As with the previously discussed anticipation/obviousness rejection in view of US '444, this rejection in view of EP '252 does not show where each and every feature of the claimed invention is described in the reference. Further, the rejection fails to set forth any rationale with regards to which prior art process steps should be optimized on how they should be optimized. Thus, the rejection should be withdrawn for these reasons alone.

EP '252 describes a process for making porous rigid resin particles using porous inorganic templates particles.

In the process of EP '252, the pores of porous inorganic template particles are filled with a reaction mixture that comprises monoethylenically unsaturated monomers, polyethylenically unsaturated cross-linking monomers and a polymerization initiator liquid

medium. The reaction material is then polymerized, and template particles are removed, yielding copolymer particles which are said to “mirror the size, surface area and preciousity of the template particles”. See page 2, lines 38-46.

EP ‘252 does not disclose or suggest a process for making organic mouldings using a matrix moulding having macroporous and mesoporous cavities. In view of the above remarks, it is respectfully submitted that EP ‘252 fails to anticipate or render obvious Applicants’ claimed invention. Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC §103 in view of Feibush et al. and Nakanishi et al..

Claims 9-11 are rejected as allegedly being obvious in view of the combination of Feibush et al. (EP ‘252) and Nakanishi et al. (WO ‘256). This rejection is respectfully traversed.

EP ‘252 is discussed above. In the rejection, it is alleged that it would be obvious to use column shaped mouldings or flat mouldings in the process of EP ‘252, in view of the disclosure of WO ‘256.

WO ‘256 discloses a process for producing inorganic porous materials suitable for use in chromatography column. In particular, WO ‘256 discloses a process for preparing an inorganic porous column composed mainly of glass or glass ceramic components. The column has interconnected continuous macropores, and also preferably contains mesopores in the walls of the macropores. Further, the column is preferably made from silica. See, page 4, lines 17-24.

In the process in WO ‘256, a solution of pore forming agent is mixed with a metalorganic compound, and the mixture is solidified via sol-gel-transition. The solution is then removed by evaporation and heat treatment, and the gel is calcined to form a porous material. According to a further process aspect, a gel having three-dimensional interconnected phase domains is prepared, in which there are domains rich in solvent and domains rich in an organic component in which surface pores are contained. The gel is immersed in a liquid that dissolves the inorganic component and the liquid is removed by evaporation and heat treatment. Thereafter, the gel is calcined to form a porous material. See page 4, line 31 – page 5, line -19.

Thus, unlike the inorganic template particles in EP ‘252, the inorganic materials of WO ‘256 are not used as a template but instead are the actual material used for chromatographic purposes. There is no suggestion in WO ‘256 of using the inorganic porous

materials described therein as a template which is to be impregnated with a polymerizable material and then dissolved. The inorganic porous material of WO '256 is the final product, not an intermediate template as in the case of EP '252.

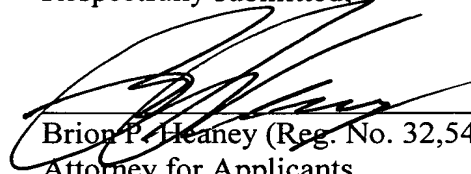
The inorganic monolithic materials having macro- and mesoporous disclosed by WO '256 are used to overcome the high flow resistance associated with beads, such as the particles described in EP '256. In WO '256, therefore, the concern is with regards to flow resistance and not the diffusion of a polymerizable material. WO '256 provides no suggestion that a monomer solution can be effectively distributed within its inorganic porous matrix. Thus, WO '256 provides no suggestion of modifying the process of EP '252 by using monolithic materials in place of template particles.

Also, the preparation of particulate materials as described in EP '252 cannot be compared with the preparation of monolithic materials as described in WO '256, which are of much greater dimensions. EP '252 provides no suggestion that its process of diffusing a polymerizable material into the template particles would be suitable in the case of much larger template materials, where diffusion would be expected to be slow and inhomogenous.

In view of the above remarks, it is respectfully submitted that EP '252, taken alone or in combination with WO '256, fails to provide sufficient motivation which would lead one of ordinary skill in the art to modify the process of EP '252 in such a manner as to arrive at an embodiment in accordance with Applicants' invention. Therefore, withdrawal of the rejection under 35 USC § 103 is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



Brion P. Heaney (Reg. No. 32,542)
Attorney for Applicants

MILLEN, WHITE, ZELANO & BRANIGAN, P. C.
2200 Clarendon Boulevard, Suite 1400
Arlington, Virginia 22201
(703)812-5308
Internet address: heaney@mwzb.com

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